

Application No.: 09/824,931

REMARKS/ARGUMENTS

Upon entry of this amendment, Claims 1-16, and 27-28 are pending, and of these, claims 1, 9, and 27 are independent.

Applicants acknowledge the Examiners comments with respect to the rejections made under 35 USC §112, and have amended claims 1, 9, and 27 to include the positioning limitation of each synthesis area being separated from its nearest neighbors by a discard area, the support for which may be found in the description on page 26, line 16 *et seq.* Applicants respectfully repeat the assertion made in the papers filed 8/25/2004 that the discard area limitation provides clarity to the subdivision of a mask into a plurality of reticle areas each associated with a distinct synthesis area (i.e. each synthesis area separated from its nearest neighbors by a discard area) on a substrate. Also, Applicants assert that the limitation of each synthesis area being separated from its nearest neighbor by a discard area further emphasizes the independence of the multiple synthesis areas on the substrate that are each associated with a reticle area on the mask.

Applicants also acknowledge the Examiners comments with respect to the rejection of claim 1 made under 35 USC §102(e)(1), referring to the mask being described in the preamble and not included as a limitation in the body of the claim. Applicants respectfully disagree with the Examiner and assert that the mask, reticles, and reticle areas as recited in the preamble provided antecedent basis for the limitations in the body of the claim, thus reciting structure. However Applicants have amended claim 1 to move the limitations of a mask that comprises a plurality of reticle areas where each reticle area comprises a plurality of reticles from the preamble to the body of claim 1. Applicants have also amended claim 27 for consistency with claim 1.

Application No.: 09/824,931

Applicants respectfully disagree with the Examiners assertion made with respect to the rejection under 35 USC §102(e)(1) that the mask of claim 9 was not included as a limitation in the body of the claim, rather the first limitation of claim 9 after the transitional phrase "comprising" as amended in the papers filed 8/25/2004 include:

"at least one mask each having a plurality of reticle areas, wherein each reticle area comprises a plurality of reticles, and each reticle area is associated with a same synthesis area on the substrate; and further wherein each synthesis area is separated by a discard area;"

However, Applicants have amended claim 9 for consistency with the amendments to claims 1, and 27 filed herewith.

Applicants assert that no new matter is presented by these amendments and respectfully request entry of the same.

Reply to Claim Rejections – 35 U.S.C. §112

Claims 1-16, 27, and 28 are rejected under 35 USC §112 as failing to comply with the written description requirement, asserting that new matter was added to each of the independent claims. As discussed above with respect to the amendments to independent claims 1, 9, and 27, Applicants have included the positioning limitation of each synthesis area being separated from its nearest neighbors by a discard area that, as the Examiner points out on Page 2, 3rd paragraph, line 6 of the office action mailed 9/23/2004, is defined in the description of the application. Applicants respectfully assert that the addition of the positioning limitation to each of the independent claims provides clarity to the separation and independence of each synthesis area on the substrate. Applicants also

Application No.: 09/824,931

respectfully assert that the clarity of the separation of each synthesis area on the substrate provides further clarity to the sub-division of the mask into discrete reticle areas each associated with a synthesis area.

Thus, Applicants respectfully assert that each of independent claims 1, 9, and 27 as amended comply with the written description requirement of 35 USC §112, and are patentable. Applicants also assert that dependent claims 2-9, 10-16, and 28 are patentable for the same reasons.

Reply to Claim Rejections – 35 U.S.C. §102(e)(1)

The Examiner has maintained rejection of claims 1-16 under 35 U.S.C. §102(e)(1) as being anticipated by Hess et al. (2002/0094533) in response to Applicants arguments stating that the mask and alignment steps of Hess et al. and the mask and sequential alignment of the mask as claimed in the present invention are different.

As described above, Applicants have amended claims 1, 9, and 27 to provide clarity to the claimed mask by including each claimed element of the mask in the body of the claim (i.e. after the transitional phrase “comprising”). Applicants respectfully reiterate the assertions made in the papers filed 7/1/2004 and 8/25/2004 that Hess et al. does not describe a mask that is divided into areas that are associated with distinct regions on a substrate, where the areas are further sub-divided and each sub-division is sequentially aligned with the associated region of the substrate for polymer synthesis.

For example, in paragraph 0021 Hess et al. describes a mask that includes areas that block a reagent from particular regions of a substrate, and other areas that are permissive to the reagent in other regions of the substrate where each particular area of

Application No.: 09/824,931

the mask is associated with each region of the substrate for a single step in the synthesis. Hess et al. then describes applying a different mask (i.e. repeating steps b and c as described in paragraph 0021) that includes associating different areas of a different mask (as pointed out by the Examiner on page 4, line 8 *et seq.* in the office action mailed 9/23/2004) with the regions on the substrate. Alternatively in paragraph 0021 Hess et al. describes translating the same mask with respect to the regions on the substrate for a subsequent synthesis step where the areas of the mask previously associated with particular regions of the substrate are no longer associated with the same regions of the substrate as they were in the previous synthesis step (i.e. as stated in Hess et al. in paragraph 0021 "to expose different through-holes").

The mask as described in Hess et al. and the alignment of such a mask(s) for polymer synthesis is different than the claimed mask and sequential alignment of said mask. In particular, Hess et al. does not describe a mask that comprises areas that are associated with the same regions of a substrate through multiple synthesis steps, rather the areas of the mask(s) of Hess et al. are either associated with regions on a substrate for a single synthesis step or the areas of the mask are translated and associated with new regions of the substrate for sequential synthesis steps.

Also, the areas (i.e. reticle areas) of the mask of the claimed invention are each associated with a particular region of the substrate for multiple synthesis steps, where each area is further sub-divided into multiple sub-divided areas (i.e. reticles) that are sequentially aligned with the region of the substrate associated with the area of the mask and a monomer is coupled at each sequential alignment step. Hess et al. in particular,

Application No.: 09/824,931

does not describe or suggest any such sub-division of an area of the mask associated with a region of the substrate for multiple synthesis steps.

Thus, Applicants respectfully assert that each of independent claims 1, 9, and 27 as amended are patentable. Applicants also assert that dependent claims 2-9, 10-16, and 28 are patentable for the same reasons.

Reply to Claim Rejections – 35 U.S.C. §103(a)

The Examiner has maintained rejection of claims 1-16, 27, and 28 under 35 USC §103(a) as being unpatentable over Hess et al. in view of *In re Venner*[262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958)] in response to Applicants arguments stating that the mask and alignment steps of Hess et al. and the mask and sequential alignment of the mask as claimed in the present invention are different, as well as Applicants arguments that the decision of *In re Venner* should not be applied to the presently claimed invention.

As described above with respect to the rejections made under 35 USC §102(e)(1), Applicants respectfully disagree with the Examiners assertion that Hess et al. teaches the presently claimed invention. In particular, the mask and alignment of said mask with regions on a substrate to synthesize polymers as described in Hess et al. is different than the mask and sequential alignment of multiple sub-divisions of the mask in each of a plurality of discrete regions of the substrate to synthesize polymers of the presently claimed invention.

Applicants also respectfully disagree with the Examiner and reiterate the assertion made in the papers filed 7/1/2004 that the decision of *In re Venner* governs providing automatic means to replace a manual process that is known in the prior art. As described

Application No.: 09/824,931

above, Applicants assert that the mask and sequential alignment of said mask of the claimed invention is not known in the prior art and patentable. Therefore providing an automatic means, such as computerization, is also patentable with respect to the claimed invention. Thus the case law of *In re Venner* does not apply to this invention.

Therefore, Applicants assert that each of claims 1-16, 27, and 28 are patentable.

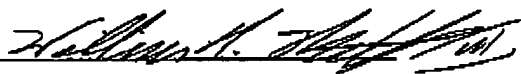
CONCLUSION

For these reasons, Applicants believe all pending claims are now in condition for allowance. If the Examiner has any questions pertaining to this application or feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (781) 280-1522.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account 01-0431.

Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

By 

William R. McCarthy III Reg. No.: 55,788

Customer No.: 22886
Legal Department
Affymetrix, Inc.
3380 Central Expressway
Santa Clara, CA 95051
Tel: 781/280-1522
Fax: 781/687-9090